UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/291,936	04/15/1999	MICHIHIRO TAMUNE	103253	2788

25944 7590 09/10/2003

OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER
HANNETT, JAMES M

ART UNIT	PAPER NUMBER
2612	7

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/291,936	Applicant(s) TAMUNE, MICHIHIRO	
	Examiner James M Hannett	Art Unit 2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7, 9-17* is/are rejected.

7)☐ Claim(s) *8 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 April 1999* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 7/21/2003 have been fully considered but they are not persuasive. As for the argument that Sasakura does not teach that a parameter is used in an image processing of the image data based upon scene analysis results output by the Auto Focus sensor. Sasakura teaches that the auto focus sensor (7) will output data to the system controller in order to perform an auto focus step. This auto focus step alters the data that is incident onto the image sensor (10). Sasakura teaches on Column 6, Lines 5-20 that image processing (11) is performed on the image data output by the image capture device (10). Because the image data incident on the image sensor (10) is based upon scene analysis results output by the analyzing circuit. It is viewed by the examiner that image processing (11) is performed on the image data output by the image capture device (10) based upon scene analysis results output by the Auto Focus sensor.

As for the argument that Muramoto teaches that the gamma value is constant and is not varied based on results of the image analysis. Muramoto teaches on Column 6, Lines 49-65 and depicts in Figure 3 that as the brightness detected by the detector rises, the gain (for gamma correction) gradually decreases. Furthermore, that by controlling the amplitude of the luminance signal in this manner the problem such that the high frequency component is excessively emphasized in the bright portion of the luminance signal can be solved.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1: Claims 1-4, and 9-14 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5,995,144 Sasakura.

2: As for Claim 1, Sasakura teaches in Figure 5 the use of a photographing image capturing device (10) that outputs image data by capturing a subject image passing through a taking lens (1). Sasakura teaches in Figure 5 the use of an analytic image capturing device (7) provided at a position adjacent to the position that is conjugate with the photographic image capturing device (10) relative to the taking lens (1), that receives light forming the subject image and outputs image data for scene analysis. Sasakura teaches in Figure 5 and on Column 4, Lines 39-51 the use of a system controller or (analyzing circuit) that performs scene analysis of the subject image based upon the image data for scene analysis output by the analytic image-capturing device (7). Sasakura teaches in Figure 5 and on Column 6, Lines 5-20 the use of an image processing circuit (11) that performs image processing on the image data output by the photographic image-capturing device (10) based upon scene analysis results output by the analyzing circuit (14).

3: In regards to Claim 2, Sasakura teaches on Columns 6-7 Lines 66-67, and 1-5 that the analytic image capturing device (7) has a smaller number of pixels (40 pixels) than the photographic image capturing device (10). Sasakura teaches that the image sensor (10) is a CCD image sensor. It is inherent in the design of a CCD image sensor for use in digital photography to have more than 40 pixels.

4: As for Claim 3, Sasakura teaches in Figure 5 and on Column 4, Lines 39-51 the use of a system controller or (analyzing circuit) that performs scene analysis of the subject image based upon the image data for scene analysis output by the analytic image-capturing device (7).

Sasakura teaches in Figure 5 and on Column 6, Lines 5-20 the system controller (14) is supplied with the image data for scene analysis output by the analytic image-capturing device (7). And calculates in advance coefficients to be used for image processing based upon the image data for scene analysis.

5: In regards to Claim 4, Sasakura teaches in Figures 2 and 5 and on Columns 6-7 Lines 66-67, and 1-5 and that the analytic image capturing device (7) is divided into a plurality of areas (2 areas) each having a plurality of pixels receiving the subject image and the analyzing circuit (14) calculates the parameters based upon image data for scene analysis output from the two areas (7a and 7b).

6: As for Claim 11, Sasakura teaches in Figure 5 the use of a first image-capturing device (10) that outputs image data by capturing a subject image passing through a taking lens (1). Sasakura teaches in Figure 5 the use of a second image-capturing device (7) that outputs image data by capturing a subject image passing through a taking lens (1). Sasakura teaches in Figure 5 and on Column 4, Lines 39-51 the use of a system controller or (analyzing circuit) that performs scene analysis of the subject image based upon the image data for scene analysis output by the second image-capturing device (7). Sasakura teaches in Figure 5 and on Column 6, Lines 5-20 the use of an image processing circuit (11) that performs image processing on the image data output by the first image-capturing device (10) based upon scene analysis results output by the analyzing circuit (14).

7: In regards to Claim 12, Sasakura teaches on Columns 6-7 Lines 66-67, and 1-5 that the first image capturing device (7) has a smaller number of pixels (40 pixels) than the first image capturing device (10). Sasakura teaches that the image sensor (10) is a CCD image sensor. It is

inherent in the design of a CCD image sensor for use in digital photography to have more than 40 pixels. Sasakura teaches in Figure 5 and on Column 4, Lines 39-51 the use of a system controller or (analyzing circuit) that performs scene analysis of the subject image based upon the image data for scene analysis output by the second image-capturing device (7).

8: As for Claim 13, Sasakura teaches in Figure 5 and on Column 4, Lines 39-51 the use of a system controller or (analyzing circuit) that performs scene analysis of the subject image based upon the image data for scene analysis output by the second image-capturing device (7). Sasakura teaches in Figure 5 and on Column 6, Lines 5-20 the system controller (14) is supplied with the image data for scene analysis output by the second image-capturing device (7). And calculates in advance coefficients to be used for image processing based upon the image data for scene analysis.

9: In regards to Claim 14, Sasakura teaches in Figures 2 and 5 and on Columns 6-7 Lines 66-67, and 1-5 and that the image capturing device (7) is divided into a plurality of areas (2 areas) each having a plurality of pixels receiving the subject image and the analyzing circuit (14) performs scene analysis based upon image data for scene analysis output from the two areas (7a and 7b).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10: Claims 5-7, and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,995,144 Sasakura in view of USPN 5,523,785 Muramoto.

11: As for Claim 5, Sasakura teaches the claimed invention as discussed in Claim 2.

Sasakura does not teach that the analyzing circuit calculates the gradation curve based upon brightness values in the image data for scene analysis; and that the image processing circuit corrects photographic image data based upon the gradation curve.

Muramoto teaches the use of a digital camera that can correct both the white balance and gamma of an image. Muramoto teaches on Column 1, Lines 32-61 the use of an analyzing circuit that calculates the gradation curve based on brightness values in the image data; and teaches that image processing corrects the image data based on the data from the gamma correction circuit.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the system controller (14) of Sasakura with the gamma correction circuitry of Muramoto to enable a digital camera to correct the gamma of a photographed image.

12: In regards to Claim 6, Sasakura teaches in Figures 2 and 5 and on Columns 6-7 Lines 66-67, and 1-5 that the analytic image capturing device (7) is divided into a plurality of areas (2 areas) each having a plurality of pixels receiving the subject image and the analyzing circuit (14) calculates the gamma curve based upon image data for scene analysis output from the two areas (7a and 7b).

13: As for Claim 7, Sasakura teaches the claimed invention as discussed in Claim 2.

Sasakura teaches that the analyzing circuit (14) calculates gains for white balance adjustment based upon the signals from the analytic image capturing device (7) and the image processing circuit (11) corrects the image data based upon gains for white balance adjustment.

Sasakura does not specifically teach that the image data for scene analysis output by the analytic image capturing device contains RGB signals.

Muramoto teaches that RGB color signals output from a CCD are commonly used for white balance adjustment in a white balance adjusting circuit (6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the digital camera of Sasakura with a color analytic image capturing device as taught by Muramoto.

14: As for Claim 15, Sasakura teaches the claimed invention as discussed in Claim 12.

Sasakura does not teach that the analyzing circuit calculates the gradation curve based upon brightness values in the image data for scene analysis; and that the image processing circuit corrects photographic image data based upon the gradation curve.

Muramoto teaches the use of a digital camera that can correct both the white balance and gamma of an image. Muramoto teaches on Column 1, Lines 32-61 the use of an analyzing circuit that calculates the gradation curve based on brightness values in the image data; and teaches that image processing corrects the image data based on the data from the gamma correction circuit.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the system controller (14) of Sasakura with the gamma correction circuitry of Muramoto to enable a digital camera to correct the gamma of a photographed image.

15: In regards to Claim 16, Sasakura teaches in Figures 2 and 5 and on Columns 6-7 Lines 66-67, and 1-5 that the second image capturing device (7) is divided into a plurality of areas (2 areas) each having a plurality of pixels receiving the subject image and the analyzing circuit (14)

calculates the gamma curve based upon image data for scene analysis output from the two areas (7a and 7b).

16: As for Claim 17, Sasakura teaches the claimed invention as discussed in Claim 12.

Sasakura teaches that the analyzing circuit (14) calculates gains for white balance adjustment based upon the signals from the second image capturing device (7) and the image processing circuit (11) corrects the image data based upon gains for white balance adjustment.

Sasakura does not specifically teach that the image data for scene analysis output by the second image capturing device contains RGB signals.

Muramoto teaches that RGB color signals output from a CCD are commonly used for white balance adjustment in a white balance adjusting circuit (6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the digital camera of Sasakura with a color second image capturing device as taught by Muramoto.

17: Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,995,144 Sasakura in view of USPN 6,157,781 Konno et al.

18: As for Claim 9, Sasakura teaches the use of a viewfinder device to which a subject image passes through a taking lens (1) is guided by a mirror (2). Sasakura teaches in Figure 5 the use of a photographing image capturing device (10) provided at a stage to the rear of a quick return mirror (2), that outputs image data by capturing a subject image. Sasakura teaches in Figure 5 the use of an analytic image capturing device (7) provided at a position adjacent to the position that is conjugate with the photographic image capturing device (10) relative to the taking lens (1), that receives light forming the subject image guided to the viewfinder device (6) from the mirror

(3) and outputs image data for scene analysis. Sasakura teaches in Figure 5 and on Column 6, Lines 5-20 the use of a system controller (14) or (arithmetic operation circuit) that is supplied with the image data for scene analysis output by the analytic image capturing device (7). And calculates in advance coefficients to be used for image processing based upon the image data for scene analysis. Sasakura teaches in Figure 5 and on Column 6, Lines 5-20 the use of an image processing circuit (11) that performs image processing on the image data output by the photographic image-capturing device (10) using the parameters calculated at the arithmetic operating circuit (14).

19: Sasakura does not teach that the mirror (2) can be a quick return mirror. Konno et al teaches on Column 3, Lines 38-45 and in figure 1 the use of a quick return mirror arranged to be swingable into two different states. Konno et al teaches that one of the states is a state in which the mirror is outside of a photo-taking interchangeable lens barrel.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the mirror of Sasakura with a quick return mirror as taught by Konno et al in order to allow the mirror to be hidden from view when a lens barrel is removed in order to prevent dirt and dust from accumulating on the mirror.

20: In regards to Claim 10, Sasakura teaches the use of a viewfinder device to which a subject image passes through a taking lens (1) is guided by a mirror (2). Sasakura teaches in Figure 5 the use of a photographing image capturing device (10) provided at a stage to the rear of a quick return mirror (2), that outputs image data by capturing a subject image. Sasakura teaches in Figure 5 the use of an analytic image capturing device (7) provided at a position adjacent to the position that is conjugate with the photographic image capturing device (10) relative to the

taking lens (1), that receives light forming the subject image guided to the viewfinder device (6) from the mirror (3) and outputs image data for scene analysis. Sasakura teaches in Figure 5 and on Column 6, Lines 5-20 the use of a system controller (14) or (arithmetic operation circuit) that is supplied with the image data for scene analysis output by the analytic image capturing device (7). And calculates in advance coefficients to be used for image processing based upon the image data for scene analysis. Sasakura teaches in Figure 5 and on Column 6, Lines 5-20 the use of an image processing circuit (11) or analyzing circuit that performs image processing on the image data output by the photographic image-capturing device (10) using the parameters calculated at the arithmetic operating circuit (14).

Sasakura does not teach that the mirror (2) can be a quick return mirror. Konno et al teaches on Column 3, Lines 38-45 and in figure 1 the use of a quick return mirror arranged to be swingable into two different states. Konno et al teaches that one of the states is a state in which the mirror is outside of a photo-taking interchangeable lens barrel.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the mirror of Sasakura with a quick return mirror as taught by Konno et al in order to allow the mirror to be hidden from view when a lens barrel is removed in order to prevent dirt and dust from accumulating on the mirror.

Allowable Subject Matter

21: Claims 8 and 18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M Hannett whose telephone number is 703-305-7880. The examiner can normally be reached on 8:00 am to 5:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-842-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service whose telephone number is 703-308-6789.

James Hannett
Examiner
Art Unit 2612

JMH
August 26, 2003

WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600